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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,528	07/24/2001	Jaime A. Ampuero Auza	KP2310USNA	4837

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WILMINGTON, DE 19805

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,528

Applicant(s)

AMPUERO AUZA ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8,9,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7 and 10-13, drawn to a nonwoven material, classified in class 442, subclass 361.
 - II. Claims 8-9, drawn to final products classified in class 384, various subclasses.
 - III. Claims 14-15, drawn to a process of making, classified in class 162, various subclasses.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a filter and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.
3. Inventions III and [I & II] are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as

claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process can be used to make paper.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Mr. Golian on April 9, 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-7 and 10-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-9 and 14-15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by HAGEN et al. (US 5,688,370).

HAGEN et al. discloses a sheet article for solid phase extraction or reaction sheet article consisting essentially of in the range of 20 to less than 100 weight percent of at least one sorptive synthetic polymer pulp selected from the group consisting of 1) aramid pulp or derivatives thereof, 2) a blend of aramid pulp (which equates to the wettable structural organic floc of the present invention), or a derivative thereof with polyolefin pulp or fibrillated polytetrafluoroethylene (which equates to the fluoropolymer floc). The sheet is prepared by a wet-laid process and the polymer pulp having enmeshed therein more than zero to 80 weight percent of at least one of sorptive and reactive particles having an average size in the range of 0.1 to 100 micrometers and in an amount sufficient to increase the sorptive or reactive capability of the sheet relative to the pulp without sorptive or reactive particles. (Refer to claim 1) The HAGEN et al. reference defines "polymer pulp" as fibril particles, which are usually frazzled. (Column 3, lines 32-35) The reference further teaches that the sheet materials are prepared by dispersing the polymer pulp(s) with or without particulate. (Column 5, lines 14-15)

9. Claims 1, 4, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by HENDREN et al. (US 4,886,578)

HENDREN et al. discloses a process for making a high heat resistant oil-impregnable insulating board that has 35-60 wt.% aromatic polyamide fibrous materials (that equates to the wettable structural organic floc of the present invention), preferably Poly (m-phenylene isophthalamide) (MPD-I) [which equates to the term meta-aramid], and 40-65 wt.% polytetrafluoroethylene (PTFE), fibrous material (that equates to the fluoropolymer floc of the

present invention). Preferably 0-20wt% are MPD-I floc and at least 35 wt.% are MPD-I fibrids. (Column 1, lines 51-61) The reference further teaches that fibrous materials include floc, pulp and fibrids. (Column 2, line 6) The reference further teaches that the sheet is produced by a dispersion of the fibrous material, a method similar to a papermaking method. (Column 3, lines 12-28) With regards to claim 4, it is noted that polytetrafluoroethylene (PTFE) is a perfluorinated straight-chain high polymer. (Encyclopedia of Polymer Science and Technology)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-3, 5-7, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over HENDREN et al. as applied to claims 1, 10 and 12 above, and further in view of GROSS (US 3,756,908).

The HENDREN et al. reference fails to teach the use of a binder.

GROSS discloses nonwoven, flexible sheet structures of commingled fibrids of a nonfusible aromatic polyamide and short aromatic polyamide fibers. (Abstract) The reference teaches that the mixture contains about 15 to 90 percent by weight of fibrids of a nonfusible aromatic polyamide and about 10 to 85 percent by weight of short fibers a of a nonfusible aromatic polyamide having an initial modulus less than 80 gm/denier. (Column 1, lines 63-68) The low modulus aromatic polyamide fibers used in the GROSS reference are short fibers

commonly referred to as "floc". (Column 3, lines 22-24) The reference further teaches that binder, e.g. acrylic polymers or epoxy resins, and the like, may also be added to the paper, either to the stock slurries, prior to sheet formation, or by conventional size-press addition to the formed sheet. (Column 4, lines 55-58) The reference further teaches the use of poly (meta-phenylene isophthalamide). (Refer to Claim 5)

With regards to the percent by weight of the binder in the nonwoven material being up to about 30%, it is noted that the ranges of the fluoropolymer floc and the wettable structural floc taught by HENDREN et al. allow for the inclusion of a binder to up to about 30% by weight in view of the GROSS reference.

With regards to the binder comprising at least one aramid fibril, it is noted that the HENDREN et al. teaches the use of aramid floc and aramid fibril, and that the method of forming the nonwoven as disclosed by GROSS allows the addition of a binder prior to sheet formation. Since both references teach a dispersion method of formation of the nonwoven, the components claimed on claims 5-7 would be expected to act as a binder. The Examiner concludes that the combination of the references reads on claims 5-7.

Since GROSS and HENDREN et al. from the same field of endeavor, the purpose disclosed by GROSS would have been recognized in the pertinent art of HENDREN et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the nonwoven and provide it with a binder with the motivation of producing a paper (nonwoven) with good elongation-to-break along with a low degree of brittleness, i.e., a good flex life as disclosed by GROSS. (Column 1, lines 57-60)

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

MEMEGER, Jr. (US 4,515,656)

ECHIGO et al. (EP 1030543A1) - discloses a nonwoven fabric material prepared from short fibers including thermal-resistant synthetic fibers bound with an inorganic binder.

(Abstract) The reference further teaches the use of aramid fibers and polytetrafluoroethylene fibers as the thermal-resistant synthetic fibers. The content of the inorganic binder ranges from 5 to 40 weight parts when the thermal-resistant synthetic fibers are 100 weight parts. (Refer to claims 3 and 6) The synthetic fibers composing the nonwoven fabric are at least one kind of fibers selected from the group consisting of PBO fibers, PBI fibers, aramid fibers, PTFE fibers and PBZ fibers. (Page 3, lines 55-57) The reference further teaches that the binder used have a high softening point or melting point, and the binding between the short fibers composing the nonwoven fabric will not be loosened even if the circuit board is exposed to a high temperature. As a result, the insulating substrate will not suffer warping and a high dimensional stability can be maintained. (Page 4, lines 1-5).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:30-4:00 pm and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

nlt

April 17, 2003



TERREL MORRIS
SUPERVISORY PATENT EXAMINER
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